What is claimed is:

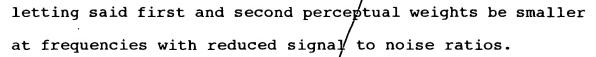1.   A noise suppression device comprising :

a time to frequency converter for performing frequency analyzation of an input time domain signal for conversion to an amplitude spectrum ;

a circuit for obtaining a noise spectrum from the input signal, a circuit for obtaining a signal to noise ratio from the amplitude spectrum and the noise spectrum, a perceptual weight control circuit for controlling based on the signal to noise ratio first and second perceptual weights for use in performing perceptual weighting in accordance with spectra ;
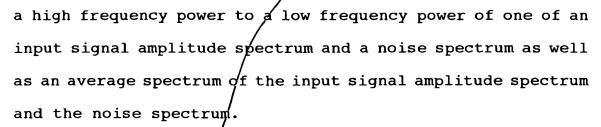
a spectrum subtracter for subtracting from said amplitude spectrum a product of said noise spectrum and the first perceptual weight as controlled by said perceptual weight control circuit ;

a spectrum amplitude suppressor for multiplying a spectrum obtained from said spectrum subtractor circuit by the second perceptual weight as controlled by said perceptual weight control circuit, and a frequency to time converter circuit for converting an output of said spectrum suppressor circuit to a time domain signal.

2.   The noise suppression device as recited in claim 1, wherein said perceptual weight control circuit is operable to let said first and second perceptual weights become larger at certain frequencies with increased signal to noise ratios while

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letting said first and second perceptual weights be smaller at frequencies with reduced signal to noise ratios.

3. The noise suppression device as recited in claim 1, further comprising a perceptual weight modifier for modifying at least one of the first and second perceptual weights at a ratio of a high frequency power to a low frequency power of any one of an input signal amplitude spectrum and a noise spectrum as well as an average spectrum of the input signal amplitude spectrum and the noise spectrum.

4. The noise suppression device as recited in claim 1, further comprising a perceptual weight modifier for modifying the first and second perceptual weights based on a determination result as to whether an input signal is a noise or an audio component.

5. The noise suppression device as recited in claim 1, wherein, in case a subtraction result of said spectrum subtractor is negative or zero, fill-up processing is done to a spectrum obtained by multiplying a third perceptual weight to a specified spectrum.

6. The noise suppression device as recited in claim 5, wherein said specified spectrum is one of an input signal amplitude spectrum, a noise spectrum, and an average spectrum of the input amplitude spectrum and the noise spectrum.

7. The noise suppression device as recited in claim 5, wherein the third perceptual weight is modified at a ratio of

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a high frequency power to a low frequency power of one of an input signal amplitude spectrum and a noise spectrum as well as an average spectrum of the input signal amplitude spectrum and the noise spectrum.

8. The noise suppression device as recited in claim 5, wherein the third perceptual weight is controlled depending on the signal to noise ratio.

9. The noise suppression device as recited in claim 5, wherein the third perceptual weight is adjusted in value through multiplication of a ratio of an input signal amplitude spectrum and an average noise spectrum.

10. The noise suppression device as recited in claim 1, wherein at least one perceptual weight is externally controlled or selected.